

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

EGG/PCT/2004 28 SEP 2004

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**PCT**

## NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY REPORT

(PCT Rule 71.1)

Date of mailing (day/month/year)	13.04.2004
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Applicant's or agent's file reference 62779	<b>IMPORTANT NOTIFICATION</b>	
International application No. PCT/FR 03/00987	International filing date (day/month/year) 28.03.2003	Priority date (day/month/year) 29.03.2002
Applicant CAMECA et al.		

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/I/B/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The Applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purpose of international preliminary examination and that "any is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

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**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(PCT Article 36 and Rule 70)

Applicant's or Agent's file reference	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR 03/00987	International filing date (day/month/year) 28.03.2003	Priority date (day/month/year) 29.03.2002
International Patent Classification (IPC) or national classification and IPC H01J37/256		
Applicant CAMECA et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets including this title page.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Instruction 607 of Administrative Instructions of the PCT).

These annexes consist of a total of 7 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement according to Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 10.10.2003	Date of completion of this report 13.04.2004
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INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

International application No. PCT/FR 03/00987

I. Basis of the report

1. This report has been drawn up on the basis of the following elements (*the replacement sheets received by the receiving office in response to an invitation according to Article 14 are considered in the present report as "originally filed" and are not annexed to the report as they contain no amendments (Rules 70.16 and 70.17.)*):

**Description, pages:**

1, 4-13 as originally filed

2, 3, 3bis received on 01.03.2004 with the letter of 26.02.2004

**Claims, No.:**

1-16 received on 01.03.2004 with the letter of 26.02.2004

**Drawings, sheets:**

2/4-4/4 as originally filed

1/4 received on 01.03.2004 with the letter of 26.02.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

International application No. PCT/FR 03/00987

4. The amendments have resulted in the cancellation of:

- the description, pages
- the claims, nos.
- the drawings, sheets

5.  This report has been written disregarding (some of) the amendments, which were considered as going beyond the description of the invention, as filed, as is indicated below (Rule 70.2(c)):

*(All replacement sheets comprising amendments of this nature should be indicated in point 1 and attached to this report).*

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty	Yes:	Claims	1-16
	No:	Claims	
Inventive Step	Yes:	Claims	1-16
	No:	Claims	
Industrial Applicability	Yes:	Claims	1-16
	No:	Claims	

2. Citations and explanations

**see separate sheets**

**As regards Point V**

**Technical field:** The application relates to a device for measuring the X-ray emission produced by an object exposed to an electron beam.

**Prior art:** Document D (US-A-3 760 180) discloses an analysis device comprising a spectrometer in which the electrons emitted by the part under examination are separated according to their energy.

**Objective:** Increase the sensitivity and the resolution of the devices and reduce the time to establish a diagnostic regarding the part to be examined.

**Solution:** Establish a zone in which the electrons are subjected to a substantially zero electric field, in which it is possible, in the following order, to limit the diameter of the beam, to deflect the beam, to measure it and to focus it without modifying the energy of the beam.

**Evaluation:** By subjecting the beam to a retarding magnetic field, the action of which is to decelerate the electrons and therefore reduce their energy, it is possible to adjust the value of the impact energy of the beam on the specimen and therefore its depth of penetration. This also results in an increase in the electron current density, which consequently increases the sensitivity of the device. The combination of the various elements of the claimed device seems to produce a result that goes beyond the sum of their individual contributions, this result making it possible to obtain a narrow electron beam, exhibiting little dispersion, and a sensitivity compatible with the fineness of the layers analyzed.